APPENDIX C

PAINT AND CLEANING SOLVENTS

Relative Evaporation Time--The relative time required for the solvent to completely evaporate, based on an arbitrary value of 1.0 for ethyl ether. The higher the number the longer the time required for evaporation.

Flash Point--The temperature of the solvent in degrees Fahrenheit at which it releases sufficient vapor to ignite in the presence of a flame. The higher the value, the safer the solvent with respect to flash point.

Explosive Limits--There is a minimum concentration of solvent vapor in air below which it will not ignite or explode; likewise a maximum concentration above which it also will not ignite. These values are expressed as the percentage of the solvent vapor in the total volume of vapor plus air. They are also called Flammable Limits.

Threshold Limit Value (TLV)--This is a measure of the concentration of a solvent vapor in the air which can be tolerated during an 8-hour working day. Since these concentrations are very low, they are expressed as parts per million (ppm) of vapor per volume of air. The higher the value, the safer the solvent.

PAINT AND CLEANING SOLVENTS

Acetone		Relative evaporation time	Flash point (°F)		ve limits volume) (max.)	Threshold limit values* (ppm)
Amyl Alcohol 100	Acetone	4	10	2.6	12.8	(1000) 750
Benzene (Benzol) 8	Amyl Acetate	50	100	1.1	7.5	100
Benzene (Benzol) 8	Amyl Alcohol	100	115	1.2	10.0	100
Butyl Acetate		8	10	1.4	7.1	10**
Carbon Tetrachloride** 8 -Not flammable- (10)5 Diacetone Alcohol		30	90	1.7	7.6	150
Carbon Tetrachloride** 8 -Not flammable- (10)5 Diacetone Alcohol	Butyl Alcohol (Butanol) .	70	105	1.4	11.2	50
Diacetone Alcohol		8	-Not	flammable-		(10)5
Ethyl Acetate 8	Diacetone Alcohol	200	145	1.8	6.9	
Ethyl Acetate 8	Di-isobutyl Ketone (DIBK)	150	140	0.8	6.2	25
Ethyl (Grain) Alcohol (Ethanol)		8		2.5	9.0	
(Ethylene Glycol Monoethyl Ether (Cellosolve) 100 110 2.6 15.7 200 Ethylene Glycol Monoethyl Ether Acetate 110 2.6 15.7 200 Ethylene Glycol Monoethyl Ether Acetate 25 130 1.7 No data 25 Hi-Flash Naphtha (Aromatic) 105 105 1.0 7.0 500 Isopropyl Acetate 10 50 1.8 7.8 250 Isopropyl Alcohol (Isopropanol) 25 65 2.5 12.0 400 Methyl (Wood) Alcohol (Methanol)*** 10 55 5.5 36.5 200**** Methylene Chloride 4 -Not flammable- (200)100 200 Methyl Ethyl Ketone (MEK) 8 30 1.8 10.0 200 Methyl Isobutyl Ketone (MIBK) 20 65 1.4 7.5 100 Mineral Spirits (Petroleum Thinner) 150 105 0.8 7.0 Refined Kerosene 800 150 0.7 5.0 Toluene (Toluol) 15 45 1.3 7.0 100	-					
Ether (Cellosolve) 100 110 2.6 15.7 200 Ethylene Glycol Monoethyl Ether Acetate (Cellosolve Acetate) . 32 130 1.7 No data 25 Hi-Flash Naphtha (Aromatic) 105 105 1.0 7.0 500 Isopropyl Acetate 10 50 1.8 7.8 250 Isopropyl Alcohol (Isopropanol) 25 65 2.5 12.0 400 Methyl (Wood) Alcohol (Methanol)*** 10 55 5.5 36.5 200*** Methylene Chloride 4 -Not flammable- (200)100 Methyl Ethyl Ketone (MEK) 8 30 1.8 10.0 200 Methyl Isobutyl Ketone (MIBK)	-	20	60	4.3	19.0	1000
Ethylene Glycol Monoethyl Ether Acetate (Cellosolve Acetate) . 32 130 1.7 No data 25 Hi-Flash Naphtha (Aromatic)	Ethylene Glycol Monoethyl					
Ether Acetate (Cellosolve Acetate) . 32 130 1.7 No data 25 Hi-Flash Naphtha (Aromatic) 105 105 1.0 7.0 500 Isopropyl Acetate 10 50 1.8 7.8 250 Isopropyl Alcohol (Isopropanol) 25 65 2.5 12.0 400 Methyl (Wood) Alcohol (Methanol)*** 10 55 5.5 36.5 200*** Methylene Chloride . 4 -Not flammable- (200)100 Methyl Ethyl Ketone (MEK) 8 30 1.8 10.0 200 Methyl Isobutyl Ketone (MIBK) 20 65 1.4 7.5 100 Mineral Spirits (Petroleum Thinner) . 150 105 0.8 7.0 Refined Kerosene 800 150 0.7 5.0 Toluene (Toluol) 15 45 1.3 7.0 100 Turpentine 100 105 0.8 No data 100 VM & P Naphtha (Benzine) 20 50 1.1 5.9 300 Water 100 -Not flammable	Ether (Cellosolve)	100	110	2.6	15.7	200
(Cellosolve Acetate)						
Hi-Flash Naphtha (Aromatic) 105					_	
(Aromatic)		32	130	1.7	No data	25
Isopropyl Acetate		105	105	1 0	П. О	F 0 0
Isopropyl Alcohol (Isopropanol) 25 65 2.5 12.0 400 Methyl (Wood) Alcohol (Methanol)*** 10 55 5.5 36.5 200*** Methylene Chloride 4 -Not flammable- (200)100 Methyl Ethyl Ketone (MEK) 8 30 1.8 10.0 200 Methyl Isobutyl Ketone (MIBK) 20 65 1.4 7.5 100 Mineral Spirits (Petroleum Thinner) . 150 105 0.8 7.0 Refined Kerosene 800 150 0.7 5.0 Toluene (Toluol) 15 45 1.3 7.0 100 Turpentine						
(Isopropanol)		10	50	1.8	7.8	250
Methyl (Wood) Alcohol (Methanol)***		25	6 5	2 E	12.0	400
(Methanol)***		25	0.5	2.5	12.0	400
Methylene Chloride 4 -Not flammable- (200)100 Methyl Ethyl Ketone (MEK)	-	1.0	55	5 5	36 5	200***
Methyl Ethyl Ketone 8 30 1.8 10.0 200 Methyl Isobutyl 20 65 1.4 7.5 100 Mineral Spirits (Petroleum Thinner) 150 105 0.8 7.0 Refined Kerosene 800 150 0.7 5.0 Toluene (Toluol) 15 45 1.3 7.0 100 Turpentine 100 105 0.8 No data 100 VM & P Naphtha (Benzine) 20 50 1.1 5.9 300 Water 100 -Not flammable					30.3	
(MEK)		1	NOC	TIAMMADIC		(200)100
Methyl Isobutyl 20 65 1.4 7.5 100 Mineral Spirits (Petroleum Thinner)		8	30	1.8	10.0	200
Ketone (MIBK) 20 65 1.4 7.5 100 Mineral Spirits (Petroleum Thinner) 150 105 0.8 7.0 Refined Kerosene 800 150 0.7 5.0 Toluene (Toluol) 15 45 1.3 7.0 100 Turpentine 100 105 0.8 No data 100 VM & P Naphtha (Benzine) 20 50 1.1 5.9 300 Water 100 -Not flammable		-				
Mineral Spirits (Petroleum Thinner)		20	65	1.4	7.5	100
Refined Kerosene 800 150 0.7 5.0 Toluene (Toluol) 15 45 1.3 7.0 100 Turpentine 100 105 0.8 No data 100 VM & P Naphtha (Benzine) 20 50 1.1 5.9 300 Water 100 -Not flammable						
Toluene (Toluol)	<u>-</u>	150	105	0.8	7.0	
Turpentine	Refined Kerosene	800	150	0.7	5.0	
VM & P Naphtha (Benzine) 20 50 1.1 5.9 300 Water	Toluene (Toluol)	15	45	1.3	7.0	100
Water 100 -Not flammable	Turpentine	100	105	0.8	No data	100
Water 100 -Not flammable	VM & P Naphtha (Benzine)	20	50	1.1	5.9	300
<pre>Xylene (Xylol) 35 85 1.0 6.0 100</pre>		100	-Not flammable			
	Xylene (Xylol)	35	85	1.0	6.0	100

^{*&}quot;TLVs Threshold Limit Values for Chemical Substances and Physical Agents in the Workroom Environment with intended Changes for 1979, "American Conference of Governmental Industrial Hygienists, P.O. Box 1937, Cincinnati, Ohio 45201. Figures in parentheses are in for intended change to the adjacent figures. The values for amyl alcohol, cellosolve, 4-flash Naphtha, Mineral Spirits (Local irritant only), Kerosene (local irritant only) were from Occupational Diseases, DHEW, NIOSH, PUB-77-181, June 1977.

**Not approved

^{***}Deadly poison